

Operators manual

Crate ECH 128

Crate ECH 12A

Contents

1. General information

2. Technical Data

3. Pin assignments

Caution!

-The unit must not be operated with the cover removed!

- We decline all responsibility for damages and injuries caused by improper use of the system. It is highly recommended to read the operator manual before any kind of operation!

Note:

All information in this document is subject to change without notice. We take no responsibility whatsoever for any error in this document. We reserve the right to make changes in the product design without any notification to the users.

File name ECH12x_eng.____; Version as of July, 2011

1. General information

The crates ECH 128 or ECH 12A are able to carry up to 8 or 10 HV-modules in **3U-Eurocassette with H15 connector** and one **universal interface board**. The crates provide the necessary supply voltages and the connections for all remote control capabilities.

During operation enough air flow has to be given to the unit.

2. Technical data

	ECH 128	ECH 12A
	8 slots 7 * 8TE (40,64mm) + 1 * max. 12TE (60,96mm)	10 slots / 8 TE (40,64mm)
AC supply voltage	Before connecting to the local mains it must be proofed that the nominal line voltage of this unit is equal to the local mains. Power: $V_{in} = 100 - 240 \text{ V-AC}$	
DC supply voltages	+ 24 V (up to 6,25 A)	+ 24 V (up to 6,25 A)
Power total	max. 150 W	
INHIBIT	Lemo-hub on the rear, connected with INHIBIT-signal from all HV-modules TTL level, LOW = active $\Rightarrow V_{OUT-x} = 0$	
Mechanical layout	19" – 3U Standard BIN (84 TE) / ca. 320 mm depth Module slot depth 160 mm CAN-connectors: 9-pin Sub-D	

3. PIN assignment

The external CAN-Bus is connected through 9-pin Sub-D connectors on the rear panel:

Input	Output	PIN	Signal	Description
9-pin Sub-D connector female	9-pin Sub-D connector male	2	CAN_L	
		3	CAN_GND	GND
		5	CAN_SHLD	Shield
		7	CAN_H	

Female H15 - connector on the back plane for the HV module

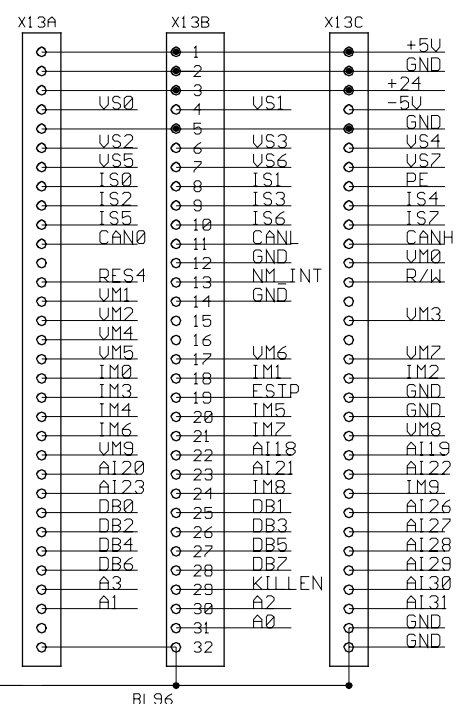
PIN	Name	Male H15 - connector / Description
8	V _{REF}	V _{8-10/12} = 5 V (1 mA) Internal reference voltage for an external potentiometer (Sliding contact on V _{VSET} or V _{ISET})
10/12	PWR_0V	Power_0 V (internal connected with HV-GND = LOW-potential)
14	V _I MON	Monitor voltage corresponding I _{OUT} : I _{OUT} = 0 to I _{OUTmax} ± 1 % ⇒ V _{14-10/12} = 0 to 5 V
20	V _V SET	Setting voltage: V _{20-10/12} = 0 to 5 V ⇒ V _{OUT} = 0 to V _{OUTmax} ± 1 %
22	POL	Polarity switching (TTL level): open or High-level ⇒ positive, Low-level ⇒ negative
24	V _V MON	Monitor voltage corresponding V _{OUT} : V _{OUT} = 0 to V _{OUTmax} ± 1 % ⇒ V _{24-10/12} = 0 to 5 V
26	PWR_+V	V _{26-10/12} = + 24 V-DC ± 5% / max. 0,8 A
28	V _I SET	Setting current: V _{28-10/12} = 0 to 5 V ⇒ I _{OUT} = 0 to I _{OUTmax} ± 1 % (connected with V _{REF} through 10 kΩ) n.c.: I _{OUTmax} is possible
30	KILL_ENA	TTL-level, High = active ⇒ HV_OFF without ramp if signal INHIBIT is active. Restoring the output voltage is only possible after operating KILL_ENA or PWR_ON. LOW (or n.c.) ⇒ HV according V _{VSET} or V _{ISET} , limited to V _{max} , I _{max} resp.
32	INHIBIT	TTL-level, LOW = active ⇒ V _{OUT} = 0 HIGH (or n.c.) ⇒ V _{OUT} according V _{VSET} (with ramp)

Female 96-pin connector for the universal interface board in the crate ECH 128

H15-slots from 0 (left) to 7 (right)

96-pin connector for
Multichannel CAN I/O (rightmost)

DB0 to DB7: POL for slots 0 to 7 (H15: 22)
VS0 to VS7: V_v-set for slots 0 to 7 (H15: 20)
IS0 to IS7: V_i-set for slots 0 to 7 (H15: 28)
VM0 to VM7: V_v-mon for slots 0 to 7 (H15: 24)
IM0 to IM7: V_i-mon for slots 0 to 7 (H15: 14)
KILLEN : KILL_ENA for slots 0 to 7 (H15: 30)
+24 V: PWR_+V for slots 0 to 7 (H15: 26)
GND: PWR_0V for slots 0 to 7 (H15: 10/12)

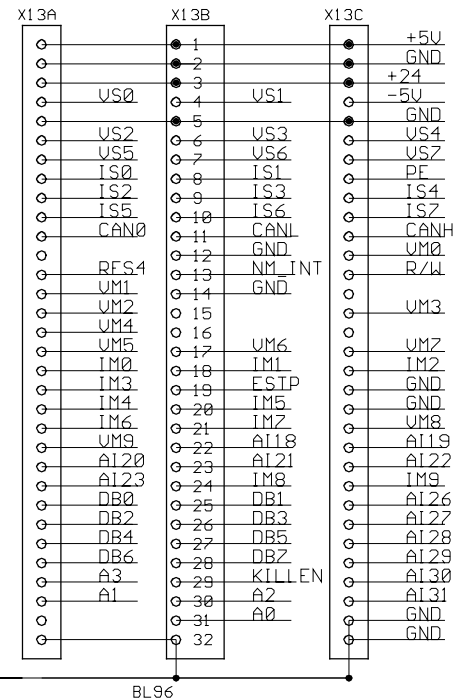


Female 96-pin connector for the universal interface board in the crate ECH 12A

H15-slots 0 (left) to 9 (right)

96-pin connector for
Multichannel CAN I/O (rightmost)

DB0 to DB7:	POL for slots 0 to 7	(H15: 22)
VSO to VS7, IS0, IS1:	V_v-set for slots 0 to 9	(H15: 20)
IS2 to IS7:	V_i-set for slots 2 to 7	(H15: 28)
VM0 to VM9:	V_v-mon for slots 0 to 9	(H15: 24)
IM0 to IM9:	V_i-mon for slots 0 to 9	(H15: 14)
KILLEN:	KILL_ENA for slots 0 to 9	(H15: 30)
+24V:	PWR_+V for slots 0 to 9	(H15: 26)
GND:	PWR_0V for slots 0 to 9	(H15: 10/12)



BL96